ORGANOPHOTORECEPTOR WITH CHARGE TRANSPORT MATERIAL HAVING A HYDRAZONE GROUP LINKED TO AN EPOXY GROUP AND A HETEROCYCLIC RING

Abstract of the Disclosure

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Improved organophotoreceptor comprises an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:

(a) a charge transport material having the formula

$$Z \subset R_1$$

$$R_2 \cap X - X - E$$

where R₁ and R₂ are, independently, H, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula $-(CH_2)_{m^-}$, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, hydroxyl group, thiol group, an alkyl group, an alkyl group, a heterocyclic group, or an aryl group;

E is an epoxy group; and

Z is a phenothiazine group, a phenoxazine group, a phenoxathiin group, a dibenzo(1,4)dioxin group, a thianthrene group, or a phenazine group; and

(b) a charge generating compound.

Corresponding electrophotographic apparatuses and imaging methods are described.